



**(43) International Publication Date**  
**21 April 2005 (21.04.2005)**

**PCT**

**(10) International Publication Number**  
**WO 2005/034756 A1**

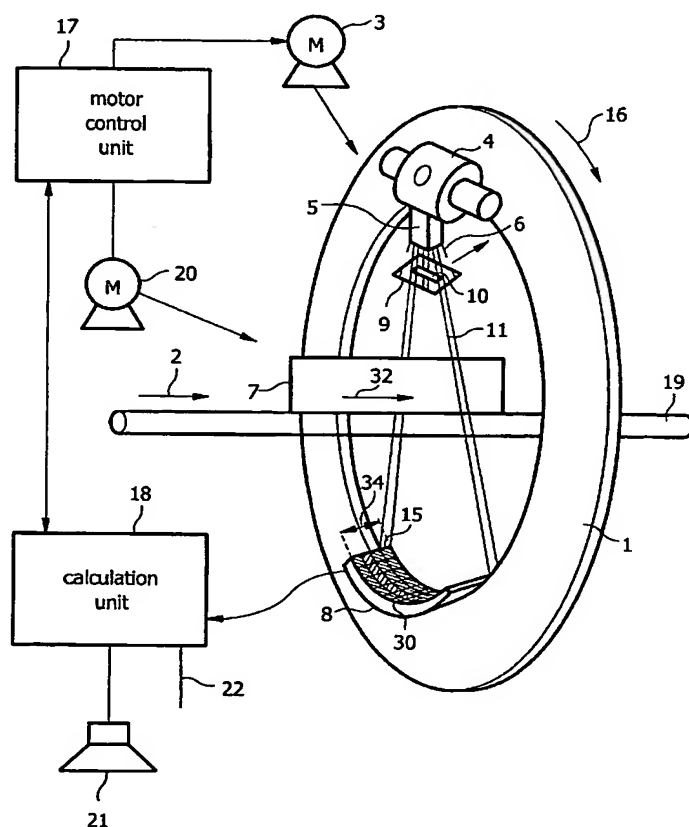
- (51) **International Patent Classification<sup>7</sup>:** **A61B 6/03,**  
G01N 23/201
- (21) **International Application Number:**  
PCT/IB2004/051970
- (22) **International Filing Date:** 5 October 2004 (05.10.2004)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**  
03103797.1 14 October 2003 (14.10.2003) EP
- (71) **Applicant (for DE only): PHILIPS INTELLECTUAL  
PROPERTY & STANDARDS GMBH [DE/DE];** Stein-  
damm 94, 20099 Hamburg (DE).
- (71) **Applicant (for AE, AG, AL, AM, AT, AU, AZ, BA, BB, BE,  
BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CY, CZ,**

DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, SZ, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW only): **KONINKLIJKE PHILIPS ELECTRONICS N. V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

- (72) **Inventors; and**  
 (75) **Inventors/Applicants (for US only): GRASS, Michael** [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE). **KOEHLER, Thomas** [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE).  
 (74) **Agent: VOLMER, Georg;** Philips Intellectual Property & Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE).  
 (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM.

*[Continued on next page]*

- (54) Title:** ASYMMETRIC CSCT



**(57) Abstract:** According to the present invention, an asymmetric acquisition system is used, where the radiation detector is arranged asymmetrically with respect to a fan beam plane of the scanner. Advantageously, this may allow to increase a scatter angle range for a given detector height in the direction of the rotational axis. Furthermore, this may allow for an optimal data flow for a combined volume absorption distribution reconstruction and subsequent coherent scatter CT reconstruction.



AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

(84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.